

**IN THE CLAIMS**

Without prejudice or disclaimer, please amend claims 5-10 and add new claims 11-16 to read as shown below:

1. (Original) A method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer, comprising the steps of:

homogeneously mixing a preceramic polymer powder, expandable hollow microspheres and a ceramic powder, and molding the mixture to form a molded body;

heating the molded body to expand it;

curing the expanded molded body; and

pyrolyzing the cured molded body.

2. (Original) The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer according to claim 1, wherein the ceramic powder is at least one material selected from the group consisting of  $\text{Al}_2\text{O}_3$ ,  $\text{ZrO}_2$ ,  $\text{MgO}$ ,  $\text{SiC}$ ,  $\text{TiC}$ ,  $\text{Si}_3\text{N}_4$ ,  $\text{AlN}$ ,  $\text{TiN}$ ,  $\text{MoSi}_2$ ,  $\text{WC}$  and mixtures thereof.

3. (Original) The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer as according to claim 1, wherein the ceramic powder is added in an amount of 50% by weight or less, based on the total weight of the starting materials.

4. (Original) A method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer, comprising the steps of:

homogeneously mixing a preceramic polymer powder and expandable hollow microspheres, and molding the mixture to form a molded body;

heating the molded body to expand it;

curing the expanded molded body; and

pyrolyzing the cured molded body.

5. (Currently Amended) The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer according to claim 1 ~~or~~ 4, wherein the expansion of the molded body is carried out by heating at a temperature of 110~200°C, the temperature range between the softening point and the melting point of the preceramic polymer, to expand the expandable hollow microspheres.

6. (Currently Amended) The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer according to claim 1 ~~or~~ 4, wherein the preceramic polymer is at least one polymer selected from the group consisting of polycarbosilane, polysiloxane, polysilazane and mixtures thereof.

7. (Currently Amended) The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer according to claim 1 ~~or~~ 4, wherein the preceramic polymer powder is added in an amount of 20% by weight or more, based on the total weight of the starting materials.

8. (Currently Amended) The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic

polymer according to claim 1 ~~or 4~~, wherein the expandable hollow microspheres are added in an amount of 20% by weight or more, based on the total weight of the starting materials.

9. The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer according to ~~any one of claims 1, 4 and 9~~ claim 1, wherein upon heating the expandable hollow microspheres to 110~200°C at atmospheric pressure, the shell is softened and the inner medium is expanded to form spherical hollow spheres having an average diameter of 10-200  $\mu\text{m}$ .

10. (Currently Amended) A highly porous ceramic fabricated from expandable microspheres and a preceramic polymer, in accordance with the method according to claim 1 ~~or 4~~ wherein the highly porous ceramic has a high porosity of not less than 60% and a pore density of not less than  $10^8$  pores/cm<sup>3</sup>.

11. (New) The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer according to claim 4, wherein the expansion of the molded body is carried out by heating at a temperature of 110~200°C, the temperature range between the softening point and the melting point of the preceramic polymer, to expand the expandable hollow microspheres.

12. (New) The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer according to claim 4, wherein the preceramic polymer is at least one polymer selected from the group consisting of

polycarbosilane, polysiloxane, polysilazane and mixtures thereof.

13. (New) The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer according to claim 4, wherein the preceramic polymer powder is added in an amount of 20% by weight or more, based on the total weight of the starting materials.

14. (New) The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer according to claim 4, wherein the expandable hollow microspheres are added in an amount of 20% by weight or more, based on the total weight of the starting materials.

15. (New) The method for fabricating a highly porous ceramic from expandable microspheres and a preceramic polymer according to claim 4, wherein upon heating the expandable hollow microspheres to 110~200°C at atmospheric pressure, the shell is softened and the inner medium is expanded to form spherical hollow spheres having an average diameter of 10-200  $\mu\text{m}$ .

16. (New) A highly porous ceramic fabricated from expandable microspheres and a preceramic polymer, in accordance with the method according to claim 4 wherein the highly porous ceramic has a high porosity of not less than 60% and a pore density of not less than  $10^8$  pores/cm<sup>3</sup>.